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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/765,290	01/27/2004	Thomas McKeown	21556-096103	9169

7590 03/06/2007 David J. Simonelli, Esq. Clark Hill PLC Suite 3500 500 Woodward Ave. Detroit, MI 48226-3435	**EXAMINER** VU, TUAN A

ART UNIT	PAPER NUMBER
2193	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/06/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

PTOL-90A (Rev. 10/06)

	Application No.	Applicant(s)
	10/765,290	MCKEOWN ET AL.
Office Action Summary	Examiner	Art Unit	
	Tuan A. Vu	2193	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>27 January 2004</u>.

2a)☐ This action is **FINAL.**   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-19</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-19</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>26 January 2004</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date <u>4/18/04</u>.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____ .

DETAILED ACTION

1.   This action is responsive to the application filed 1/27/2004.

Claims 1-19 have been submitted for examination.

Claim Objections

2.   Claims 1, 6, 8 are objected to because of the following informalities: the terminology

such as 'maps' or 'mapping engine' does not seem proper usage because there is no mapping

connotation from the claim as a whole. These terms in light of the specifications (Specs, pg. 6)

this map is a link between requesting or viewing clients while the usage of this mapping concept

as claimed amounts to either invoking a portion of atom, or coordinating other maps. The

language usage is consistent with commonly accepted of what entails when a mapping action is

taken; and the maps will be treated as a invoking entity so that the mapping engine is for

coordinating more invoking. Appropriate correction is required lest this would lead to a 35 USC

112 type of rejection. Correction is to be extensively effected throughout the claimed invention.

3.   Claim 13 recites 'maps associated with function'. The term 'function' is to be

syntactically more <u>defined</u> -- with some article like 'a' or 'the' -- because of the connotation

implicating a defined *association* recited along with some previous *maps*.

Claim Rejections - 35 USC § 101

4.   35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new
> and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

5.   Claims 1-19 are rejected under 35 U.S.C. 101 because the claimed invention is directed

to non-statutory subject matter.

> The Federal Circuit has recently applied the practical application test in determining whether the claimed
> subject matter is statutory under 35 U.S.C. § 101. The practical application test requires that a " useful, concrete,

and tangible result" be accomplished. An "abstract idea" when practically applied is eligible for a patent. As a consequence, an invention, which is eligible for patenting under 35 U.S.C. § 101, is in the "useful arts" when it is a machine, manufacture, process or composition of matter, which produces a concrete, tangible, and useful result. The test for **practical application** is thus to determine whether the claimed invention produces a "useful, concrete and tangible result".

The following link on the World Wide Web is for the United States Patent And Trademark Office (USPTO) policy on

35 U.S.C. §101.

http://www.uspto.gov/web/offices/pac/dapp/opla/preognotice/guidelines101_20051026.pdf (refer to pg. 47-54)

Claims 1-19 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The current focus of the Patent Office in regard to statutory inventions under 35 U.S.C. § 101 for method claims and claims that recite a judicial exception (software) is that the claimed invention recite a practical application. Practical application can be provided by a physical transformation or a useful, concrete and tangible result.

Specifically, claim 1 recite an application software comprising plurality of atoms, maps, and map engine, all of which appeared from scanning the Specifications to be software-implemented entities. Listing of mere software without hardware embodiment to support the carrying out of the functionality integral to such software is considered non-practical because there is no reasonable possibility that the software as recited can yield a data transformation via hardware execution. Further, there is no sufficient teaching about the effect of the recited *executing* step in order to convey that any ensuing data transformation would be of some real-world practical usage; thus, the claim as a whole is deemed not able to generate any tangible real-world application result. The claim for failing the test for *Practical Application*, is rejected as a non-statutory subject matter.

Claims 2-5 are rejected for not remedying the lack of hardware support in claim 1.

Claim 6 recites assembly of software with the same entities as recited in claim 1; thus

claim 6-7 for failing to generate a tangible, concrete and useful result, are rejected as a non-

statutory subject matter.

Claim 8 recites a method of performing a function including a plurality of maps and

atoms, activating a map engine, cataloguing the atoms, identifying and associating an event with

one of the plurality of maps, executing each of the atoms thus identified by the map loaded in

response to the event. The mere fact of loading an engine in response to an event and executing

the components identified by the loaded engine merely entails event-triggered execution of what

appears to be internal atoms of a software function. That is, internal execution of software

atomic entities by a (computer) execution engine does not convey the realization of a tangible

result, such that it is concretely useful in terms of a application-level and real-world usage,

lacking any other teachings as to how this result can be perceived at the application level. The

claim fails, as a whole, to sufficiently establish the externalization of software functionality (via

atomic entities being executed) in terms of application _useful_ result that is deemed tangible with

respect to any user trying to put claimed method into use. The claim 8 for failing to the _Practical_

Application test, is rejected for leading to a non-statutory subject matter.

Claims 9-19 fail to remedy to the non-practical application deficiency, i.e. lack of useful

and tangible result, as set forth above, and are also rejected for leading to a non-statutory subject

matter.

Claim Rejections - 35 USC § 102

6.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

7.   Claims 1-19 are rejected under 35 U.S.C. 102(b) as being anticipated by Zhang et al.,

USPN: 6,282,699 (hereinafter Zhang).

As per claim 1, Zhang discloses modular assembly of software configured to perform a

function, said modular assembly comprising:

a plurality of atoms (e.g. script node, code node – col. 9, lines 45-61), each of said

plurality of atoms designed to execute a defined task;

a plurality of maps (e.g. Fig. 9-13; script 412, 412 – Fig. 6) invoking a portion of said

plurality of atoms for executing events (e.g. functions – Fig. 8; script 414, 412 – Fig. 7) that

include a portion of said defined task; and

a map engine in communication with each of said plurality of maps (e.g. Fig. 3-4;

Graphical program 402 – Fig. 6; col. 9, line 35 to col. 10, line 23), said map engine coordinating

an order and a timing (e.g. Note: user customizing via selection of graph node, test directives

with input into script specification – see Fig. 8; col. 17-18; *add input* -- Fig. 10; *can be*

performed ... different orders – col. 9, lines 24-26; Fig. 12 -- reads on coordinating via the GUI

Matlab/Labview interface to effect *order and timing* of testing of code nodes) for starting of each

of said plurality of maps,

wherein said map engine modifies said order and said timing based on inputs and

variables received (e.g. input -- Fig. 10; col. 17, lines 32-45; col. 18, lines 15-24; col. 11, lines 1-

15; Fig. 3-5) thereby before and during operation of said plurality of maps.

As per claims 2-3, Zhang discloses a prioritizer to identify said order and said timing of execution (see Fig. 8; col. 17-18; *add input* -- Fig. 10; *can be performed ... different orders* – col. 9, lines 24-26; Fig. 12 –Note: user selection reads on ability to prioritize what needs to execute first via connecting elements – see Fig. 3 -- to a graph script in some order) of each of said plurality of maps and each of said plurality of atoms; wherein said prioritizer includes input lines which receive inputs from clients (e.g. step 308-309 – Fig. 3; Fig. 7-9; *user ...enter code ... textual code* – col. 10, lines 30-35) that may change said order and said timing of execution of each of said plurality of maps.

As per claims 4-5, Zhang discloses wherein each of said plurality of atoms includes a design element classifying a type of executable, identifying inputs required to operate the executable and identifying a purpose therefor (see Fig. 7-9; input – Fig. 10, type – Fig. 15; *input and output terminals* – col. 15, lines 29-63; col. 17, line 55 to col. 18, line 28); wherein each of said plurality of atoms includes an execution element (e.g. col. 13, lines 53-57; DLL 432, 434 – Fig. 7; Fig. 6; script node, code node – col. 9, lines 45-61; Fig. 5) that executes said defined task.

As per claim 6, Zhang discloses a modular assembly of software configured to perform a function, said modular assembly comprising:

a plurality of atoms designed to execute a plurality of tasks, each of said plurality of atoms including a design element and an execution element such that each of said design elements identifies a type of executable, inputs required by each of said plurality of atoms and purpose therefor (e.g. Fig. 7-9; input – Fig. 10, type – Fig. 15; *input and output terminals* – col. 15, lines 29-63; col. 17, line 55 to col. 18, line 28); wherein each of said plurality of atoms

includes an execution element (e.g. col. 13, lines 53-57; DLL 432, 434 – Fig. 7; Fig. 6; script

node, code node – col. 9, lines 45-61; Fig. 5), and

each of said execution elements execute said defined task (e.g. col. 13, lines 53-57; Fig.

5);   .

a plurality of maps invoking a portion of said plurality of atoms for executing events that

include a portion of said defined task (Fig. 9-13; script 412, 412 – Fig. 6; functions – Fig. 8;

script 414, 412 – Fig. 7); and

a map engine in communication with each of said plurality of maps (Fig. 3-4; Graphical

program 402 – Fig. 6; col. 9, line 35 to col. 10, line 23), said map engine coordinating an order

and a timing for starting of each of said plurality of maps, wherein said map engine modifies said

order and said timing based on inputs and variables received (see Fig. 8; col. 17-18; *add input* --

Fig. 10; *can be performed ... different orders* – col. 9, lines 24-26; Fig. 12) thereby before and

during operation of said plurality of maps.

As per claim 7, refer to rejection as set forth in claim 2.

As per claim 8, Zhang discloses a method of performing a function, including a plurality

of defined tasks, using a map engine, a plurality of maps, and a plurality of atoms, each having

design and executable elements (e.g. *invoke execution, edit the code* - col. 3, lines 46-63;

Mathmetics, formula, Matlab - Fig. 8; Fig. 3, 10-13), the method comprising the steps of:

activating the map engine (e.g. Fig. 3-4; Graphical program 402 – Fig. 6; col. 9, line 35 to

col. 10, line 23);

cataloging each of the plurality of atoms so that the map engine has an accurate inventory

(import ... from a file – col. 10, lines 40-49; Fig. 8 – Note: Math functions in a Matlab tool – see

col. 16, lines 5-39 -- reads on functions being stored in a reusable library analogous to

cataloguing) of the plurality of atoms available;

identifying an occurrence of an event (Fig. 3 – Note: any user action reads on event);

associating the event with one of the plurality of maps (Fig. 3); loading the one of the plurality of

maps associated with the event (Fig. 3-5); and executing each of the plurality of atoms identified

with the one of the plurality of maps such that the function to be performed is done in response

to the occurrence of the event (e.g. Fig. 7-9; input – Fig. 10, type – Fig. 15; *input and output*

terminals – col. 15, lines 29-63; col. 17, line 55 to col. 18, line 28).

As per claims 9-10, Zhang discloses loading a plurality of maps, each being loaded in

response to an identification of an event (e.g. Fig. 3-4; Graphical program 402 – Fig. 6; col. 9,

line 35 to col. 10, line 23; Fig. 8-10 – Note: Labview and user-driven loading of screen and script

node reads on plurality of maps to invoke scripts executable node; wherein the step of

identifying an occurrence of an event includes the receipt of an input (e.g. Fig. 7-9; input – Fig.

10, type – Fig. 15; *input and output terminals* – col. 15, lines 29-63; col. 17, line 55 to col. 18,

line 28).

As per claim 11, Zhang discloses the step of receiving the input into one of the plurality

of atoms (refer to claim 10).

As per claims 12 and 14, Zhang discloses changing the plurality of atoms associated

with the plurality of maps based on a change in the function to be performed (e.g. Fig. 3, Fig. 5

Note: selection of graph node by user in light of option to test and reintegration of instance

provided from server reads on any change of function to be executed leading to *changing the*

number of atoms being executed -- in view of the user customizing of script and verification of

script constructs – see col. 16-19, and user's change due to rule-based authorizing of properly

validated atoms);

As per claims 13 and 15, Zhang discloses changing the plurality of maps (e.g. col. 16-

19) associated with function based on a change in the function to be performed (Note: a input

specifying by a user to effect some script adapting, selection for reediting, for output generating

or re-evaluating, thus implicating more than one debugging scenarios – see *executing scripts –*

col. 9, lines 45-53; Fig. 13-14; *choose server script, debugging* - col. 18-19 – reads on *changing*

the number of maps being invoked).

As per claims 16-17, Zhang discloses changing the plurality of atoms is performed

independently (Fig. 8; Fig. 3) of the step of changing the plurality of maps; and wherein the step

of changing the plurality of maps is performed independently of the step of changing the

plurality of atoms (Note: selecting and dropping of code node into a graph – see Fig. 3 -- is

independent from changing the script scenario as a consequence of debugging or reevaluating

output from running previous scripts – refer to claim 15).

As per claims 18-19, Zhang discloses wherein the step of changing the plurality of atoms

includes the step of modifying the number of the plurality of atoms being executed with one of

the plurality of maps (re claim 14); wherein the step of changing the plurality of atoms includes

the step of modifying an order (Fig. 8; col. 17-18; *add input* -- Fig. 10; *can be performed ...*

different orders – col. 9, lines 24-26; Fig. 12) in which the plurality of atoms are executed within

one of the plurality of maps.

Conclusion

8.   Any inquiry concerning this communication or earlier communications from the
examiner should be directed to Tuan A Vu whose telephone number is (272) 272-3735. The
examiner can normally be reached on 8AM-4:30PM/Mon-Fri.

       If attempts to reach the examiner by telephone are unsuccessful, the examiner's
supervisor, Meng-Ai An can be reached on (571)272-3756.

       The fax phone number for the organization where this application or proceeding is
assigned is (571) 273-3735 (for non-official correspondence - please consult Examiner before
using) or 571-273-8300 (for official correspondence) or redirected to customer service at 571-
272-3609.

       Any inquiry of a general nature or relating to the status of this application should be
directed to the TC 2100 Group receptionist: 571-272-2100.

       Information regarding the status of an application may be obtained from the Patent
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system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR
system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Tuan A Vu
Patent Examiner,
Art Unit 2193
March 2, 2007